Remarks

Claim 12 is pending and stands rejected in Examiner's Office Action dated May 15, 2007 under 35 U.S.C. § 103 for obviousness on the basis of Norman 6,674,259, in view of BOTBALL, although the Examiner later suggests that the rejection may be further in view of US published patent application 2002/0155884 A1 to Updike. The title has been amended herein to conform with pending claim 12, and resembles the title of the application as originally filed.

Applicant notes with appreciation the removal of the previous rejection based on alleged obviousness of the claimed subject matter, in view of applicant's previous response, in which it was pointed out that the rejection lacks a prima facie case. For the reasons discussed below, the present rejection also fails to make a prima facie case, and the rejection should be withdrawn.

Discussion

1. Pending Claim 12 requires conducting a series of matches between two competing alliances of teams, and in each match "determining a final score for a winning alliance ... by enhancing the raw score of the winning alliance by a function of the raw score of the other alliance" and using the scores thus enhanced in ranking the teams over the series of matches.

As discussed in the previous response, the pending claim 12 requires a novel scoring method in a robotics competition, in which the winning alliance's raw score is enhanced by a function of the raw score of the losing alliance. Although the Examiner asserts in the outstanding Office Action that "what applicant appears to be claiming as the novelty of the invention has been practiced for centuries in playing games with children" (Office Action, page 3), the Examiner is ignoring key limitations of the claim.

For convenience in discussing pending claim 12, it is reproduced in Appendix A hereto, where successive paragraphs of the body of the claim have been numbered consecutively. Preliminarily, the claim requires a "contest" **(¶1)** that includes a series of "matches between two

competing alliances of the teams" (**¶3**), wherein "each match include[es] a plurality of teams from each alliance" (**¶3** also). The scoring system claimed herein is used in a ranking of the teams ((**¶7**) "based on final scores achieved in matches in which they participate" ((**¶7** also).

The claim therefore requires scoring, not over a single match, but rather over a series of matches between alliances. In each match, a team participates in a alliance with at least one other team. (Of course, in order that all teams get to participate, the composition of the alliances typically changes from match to match.) No child's game operates in this fashion. If the Examiner believes otherwise, then Applicant respectfully requests, pursuant to 37 C.F.R. § 104(d)(2), an affidavit from the Examiner setting forth the basis for Examiner's assertion. See MPEP § 2144.03(C). Applicant requests that such affidavit relate to the state of the art as of the effective filing date of the present application.

The claims in fact require more than what we have discussed so far. The scoring over the series of matches, used in ranking the teams pursuant to **¶7** of the claim, is unique. Every time an alliance wins a given match, the winning alliance's score is enhanced by a function of the losing alliance's score (**¶6**)—the patent application gives as an example adding twice the loser's score (see, among other places, paragraphs 157-159 of the published application herein—and each team in the alliance is given its alliance's score in the match (**¶7**).

The objective effect of such a scoring system is that teams in an alliance that defeats another alliance by a score of 30-0 will receive a lower score, for ranking purposes under **¶7**, than teams in an alliance that defeats another alliance by a score of 20-19. Under the scenario we have described (based on paragraphs 157-159 of the published application herein, where the function required by **¶7** of the pending claim is implemented by adding twice the losing alliance's score to the score of the wining alliance), in the first scenario the teams in the winning alliance get 30 points for ranking purposes, but in the second scenario the teams in the winning alliance get 20 plus 2 times 19 points, or 58 points. The ranking system of **¶7** therefore has the objective effect of rewarding the teams playing in an alliance that permits the losing alliance to get a score nearly as

high as the winning alliance.1

As I stated in the previous response, this is an extraordinary way of scoring. Certainly in the history of robotics competitions such a scoring system is unique. In virtually all competitions in which a high score determines the winner, the goal is to trounce the adversary. In the present application, however, the winning alliance receives a scoring benefit by making the losing alliance score as close to the raw winning score as possible. Nothing in the art of record discloses or suggests such an extraordinary scoring system.

2. The Office Action has failed to address key limitations of Claim 12.

The Office Action cites Norman, U.S. patent 6,674,259 as teaching robotics competitions, and the BOTBALL robotics competition as rendering the subject matter claimed herein obvious. The Examiner characterizes BOTBALL as a robotics competition wherein "[i]n completing the tasks they are assigned points and at the end the team with the highest point value is declared the winner." Office action, May 15, 2007, page 2, numbered paragraph 2. The Examiner asserts that "it would have been obvious for a person of ordinary skill in the art to combine Norman et al. and the well-known BOTBALL to obtain the invention as specified in claim 12." *Id.*

However, the Examiner next admits that Norman lacks a limitation of claim 12 because it does not disclose "adding a portion of the losing teams [sic] score to the winner's total score". *Id.* The Examiner then—wrongly— states that this concept "is taught in poker tournaments and in gambling", citing US published patent application 2002/0155884 A1 to Updike.

The Examiner apparently believes that Updike teaches this feature, even though she states only that in fair peer-to-peer gambling taught by Updike, "the winning points are subtracted from

1The Examiner notes that applicant asserts "that the winning alliance would be motivated to cause the other alliance to achieve a high raw score", Office Action, numbered paragraph 3, page 3, and then asserts that this limitation is "speculative and not supported by any objective evidence." *Id.* This bizarre comment is not understood. A limitation does not need to be supported by evidence, but rather by the application. The application has abundant references to the scoring system as fostering cooperation. See, for example, paragraph 6 of the published application herein. Moreover, the analysis herein shows that, on an objective basis, in each match, each alliance is motivated by the scoring system to conclude the match with a score close to that of the other alliance.

the loser's account and added to the winner's account." Office Action, numbered paragraph 2, pages 2-3.

Setting aside the mischaracterization of the Updike reference, the Office Action, yet again, ignores limitations of the pending claim. The pending claim, as discussed above, requires a series of matches between alliances in which each of a plurality of teams forms an alliance. (¶3) The Examiner ignores this critical language. Where is there a reference by the Examiner to competing alliances of teams? Where is there a reference by the Examiner to a series of matches? The scoring system required by the claim is required to be used in the ranking of teams. (¶7) Where is there a reference by the Examiner to ranking of teams that have participated in a series of matches? As discussed in the section 1 above, these are key limitations of the claim, yet the Office Action says nothing about them.

3. Because the Office Action has failed to address key limitations of Claim 12, it fails to make a prima facie case for rejection, the rejection is improper. Moreover, the Office Action misconstrues a prior art reference that is critical to the rejection.

It is the law that a claim cannot be rejected for obviousness unless all the claim limitations are addressed by the Patent and Trademark Office. "To establish prima facie obviousness of a claimed invention, **all** the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." MPEP § 2143.03 (emphasis added). The claim limitation are not options for the Examiner to consider. The law requires that all of the claim limitations must be addressed.

Because key limitations of the pending claim have not been addressed by the Office Action, the rejection is improper and must be withdrawn.

Although the foregoing circumstances are already dispositive of the Office Action, which improperly rejects the pending claim, the Office action is additionally flawed because it misconstrues the Updike reference on which it depends. The Examiner implies that the Updike references teaches "adding a portion of the losing teams [sic] score to the winner's total score". Office Action, page 2. The Updike reference concerns gambling, which like many games, is a

zero-sum game, namely "A situation in which a gain by one person or side must be matched by a loss by another person or side". *American Heritage Dictionary of the English Language* (Fourth Edition, 2000). See, more generally, Roger A. McCain, "Zero-Sum Games" in *Game Theory: An Introductory Sketch*, available at

http://william-king.www.drexel.edu/top/eco/game/zerosum.html:

"**DEFINITION: Zero-Sum game** If we add up the wins and losses in a game, treating losses as negatives, and we find that the sum is zero for each set of strategies chosen, then the game is a 'zero-sum game.'"

The Updike reference teaches precisely a prior art zero-sum game, because, as recited in the abstract, "the winning points are preferably subtracted from the loser's account and added to the winner's account". The sum of these changes to accounts is zero. Updike thus involves a zero-sum game.

Updike has nothing to do with the requirement of pending claim 12. As discussed above, claim 12 requires that every time an alliance wins a given match, the winning alliance's score is enhanced by a function of the losing alliance's score (**¶6**). In claim 12, nothing is subtracted from the losing side, which keeps its points. Instead, the winning side has its score enhanced by a function (for example, multiplying by 2) of the loser's score. As between the two alliances, it is not a zero-sum game. Accordingly, the Examiner is mistaken in finding anything in Updike that is relevant to the subject matter of claim 12.

Accordingly, (1) because key limitations of the pending claim have not been addressed by the Office Action, and (2) a reference on which the Office action depends for its rejection has been misconstrued, the rejection is improper and must be withdrawn.

Conclusion

For the foregoing reasons, the record of prosecution of the present application has been, and remains, utterly devoid of any basis for rejection of the pending claim. The rejection under 35 U.S.C. § 103 is improper and must be withdrawn. Accordingly, claim 12 is in condition for allowance. Reconsideration of the application and issuance of a notice of allowance are respectively requested.

To facilitate examination of the present application, in the event that the Examiner intends any action other than allowance of the pending claim, Applicant requests the courtesy of a personal interview with the Examiner and the Supervisory Patent Examiner to discuss the present application prior to any negative action by the Examiner. Please telephone the undersigned so that such an interview may be scheduled.

Applicant believes that no extension of time is required for timely consideration of this response. In the event that an extension has been overlooked, applicant requests that deposit account number 19-4972 be charged for any fees that may be required for the timely consideration of this application.

Respectfully submitted,

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